



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,375	12/14/2001	Harinath Garudadri	010331	8079

23696 7590 01/23/2006

QUALCOMM, INC  
5775 MOREHOUSE DR.  
SAN DIEGO, CA 92121

EXAMINER

OPSASNICK, MICHAEL N

ART UNIT	PAPER NUMBER
----------	--------------

2655

DATE MAILED: 01/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/017,375

Applicant(s)

GARUDADRI ET AL.

Examiner

Michael N. Opsasnick

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kay et al (5703881) in view of Pickering et al (6738457).

As per claim 1, Kay et al (5703881) teaches:

“A subscriber unit, comprising:” as a multi-subscriber unit (Fig. 1, subblock 22);

“a feature extraction module configured to extract a plurality of features of a speech signal” as speech data in PCM format (col. 7 lines 5-6);

“a voice activity detection module configured to detect voice activity within the speech signal and provides an indication of the detected voice activity” as voice activity detector (VAD – 56) detects voice/speech (col. 7 lines 5-10);

“a transmitter coupled to the feature extraction module and the voice activity detection module and configured to transmit the indication of detected voice activity ahead of the plurality of features” as first reporting the voice activity to the MSU controller, then based on that activity,

Art Unit: 2655

the MSU controller calls for the compressed speech data, based on the type of voice activity detected (col. 7 line 30-36).

Kay et al (5703881) does not explicitly teach transmission of the parameters to a speech recognition device (Kay et al (5703881) teaches wireless transmission, but not to a speech recognition device). Pickering et al (6738457) teaches the transfer of parameters to a recognition device (col. 6 line 64 – col. 7 line 27). Therefore, it would have been obvious to one of ordinary skill in the art of speech signal processing to modify the system as taught by Kay et al (5703881) with transmission to a recognition device located elsewhere because that particular system may have better processing capabilities (col. 7 lines 20-21).

As per claim 2, Kay et al (5703881) teaches:

“A subscriber unit, comprising” as a multi-subscriber unit (Fig. 1, subblock 22)

“means for extracting a plurality of features of a speech signal” as speech data in PCM format (col. 7 lines 5-6);

“means for detecting voice activity with the speech signal and providing an indication of the detected voice activity” as voice activity detector (VAD – 56) detects voice/speech (col. 7 lines 5-10);

“a transmitter coupled to the feature extraction means and the voice activity detection means and configured to transmit the indication of detected voice activity ahead of the plurality of features” as first reporting the voice activity to the MSU controller, then based on that activity, the MSU controller calls for the compressed speech data, based on the type of voice activity detected (col. 7 line 30-36).

As per claims 3,4, Kay et al (5703881) teaches:

“further comprising a means for combining the plurality of features with the indication of detected voice activity, wherein the indication of detected voice activity is ahead of the plurality of features” as an embodiment of the speech VAD, speech extraction/compression functions are combined together (col. 7 lines 9-12; Fig. 6a).

As per claim 5, Kay et al (5703881) teaches:

“A method of transmitting speech activity, comprising:” as transmitting of speech information (col. 6 line 65 – col. 7 line 4);

“extracting a plurality of features of a speech signal” as speech data in PCM format (col. 7 lines 5-6);

“detecting voice activity within the speech signal and providing an indication of the detected voice activity, and” as voice activity detector (VAD – 56) detects voice/speech (col. 7 lines 5-10);

“transmitting the indication of detected voice activity ahead of the plurality of features” as first reporting the voice activity to the MSU controller, then based on that activity, the MSU controller calls for the compressed speech data, based on the type of voice activity detected (col. 7 line 30-36).

As per claim 6, Kay et al (5703881) teaches:

Art Unit: 2655

“A method of transmitting speech activity, comprising:” as transmitting of speech information (col. 6 line 65 – col. 7 line 4);

“extracting a plurality of features of a speech signal” as speech data in PCM format (col. 7 lines 5-6);

“detecting voice activity with the speech signal and providing an indication of the detected voice activity; and” as voice activity detector (VAD – 56) detects voice/speech (col. 7 lines 5-10);

“combining the plurality of features with an indication of the detected voice activity, thereby creating a combined indication of detected voice activity and features, wherein the indication of detected voice activity is ahead of the plurality of features.” as first reporting the voice activity to the MSU controller, then based on that activity, the MSU controller calls for the compressed speech data, based on the type of voice activity detected (col. 7 line 30-36), and an embodiment of the speech VAD, speech extraction/compression functions are combined together (col. 7 lines 9-12; Fig. 6a).

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2655

***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Wayne Young, can be reached at (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mno  
1/17/06

  
**WAYNE YOUNG**  
**SUPERVISORY PATENT EXAMINER**